TECATEC PPS CW50 PL V01 natural - Composite Materials

Chemical Designation
PPS (Polyphenylensulfide)

Colour
natural

Density
1.52 g/cm^3

Fillers
carbon fibres

Main features
- excellent chemical resistance
- inherent flame resistance
- excellent mechanical properties

Target Industries
- automotive industry
- mechanical engineering
- oil and gas industry
- safety engineering
- sporting goods

The material is in the phase of further development. The characteristic values of this product may change.

General material information	parameter	value	unit	norm	comment
Fibre type		Carbon HT 3k		-	
Fibre architecture		Twill 2/2		-	
Fibre areal weight		200	g/m²	-	
Fibre volume content		50	%	-	
Resin weight content		42.7	%	-	
Areal weight finished product		349	g/m²	-	
Material widths		625x525	mm	others on request	
thickness		1-95	mm	-	
Fibre orientation		0-90°		others on request	

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength		680	MPa	ISO 527-4	
Modulus of elasticity (tensile test)		55000	MPa	ISO 527-4	
Flexural strength		780	MPa	ISO 14125	
Modulus of elasticity (flexural test)		57000	MPa	ISO 14125	
Compression strength		650	MPa	ISO 14126	
Compression modulus		51000	MPa	ISO 14126	
Interplanar shear strength		131	MPa	ISO 14129	

Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		90	°C	-	(1) approximate value
Melting temperature		285	°C	-	
Service temperature	short term	260	°C	-	
Service temperature	long term	230	°C	-	
Thermal expansion (CLTE)	in 0° and 90° direction	5	10^{-6} K^{-1}	- 1)	

Predrying	parameter	value	unit	norm	comment
Drying temperature		150	°C	-	
Drying time		2-3	h	-	

Ensinger Composites Schweiz GmbH
Libernstraße 24
8112 Otelfingen
Switzerland

composites@ensingerplastics.com
ensingerplastics.com

Date: 2023/06/02

Version: AE